

WHAT IS CLAIMED IS:

1. A thermoplastic composition based on polyamide reinforced with regard to impacts comprising:
 - 5 I) from 60 to 99% by weight of the total weight of the composition of at least one polyamide (I),
 - II) from 1 to 40% by weight of the total weight of the composition of at least one block copolymer (II) corresponding to the following general formula
 - 10 $Y-B-Y'$
 - in which:
 - B is an elastomeric block thermodynamically incompatible with the Y and Y' blocks,
 - Y and Y' have or do not have the same chemical
 - 15 composition as one another,
 - at least one of the two blocks Y and Y' being partially or entirely composed of poly(methyl methacrylate),
 - III) from 0 to 20% by weight of the total weight of the composition of at least one impact additive,
 - 20 the total of (II) and (III) not exceeding 50% by weight.
2. The composition as claimed in claim 1, characterized in that it preferably comprises:
 - 25 from 70 to 98% by weight of (I)
 - from 2 to 30% by weight of (II).
3. The composition as claimed in claim 1 or 2, characterized in that B is obtained by the
- 30 polymerization of at least one monomer chosen from butadiene, isoprene, 2,3-dimethyl-1,3-butadiene, 1,3-pentadiene or 2-phenyl-1,3-butadiene.
4. The composition as claimed in claim 3,
- 35 characterized in that B is obtained by the polymerization of butadiene.
5. The composition as claimed in one of the preceding

claims, characterized in that Y and Y' are obtained by the polymerization of at least one monomer chosen from styrene and short-chain alkyl methacrylates, such as methyl methacrylate.

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6. The composition as claimed in claim 5, characterized in that Y is a block composed predominantly of styrene and in that Y' is a block composed predominantly of methyl methacrylate syndiotactic to a level of greater than 60%.

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7. The composition as claimed in claim 1, characterized in that the impact additive is chosen from the group consisting of elastomers, such as EPDM or elastomeric polyolefins.

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8. The composition as claimed in one of the preceding claims, characterized in that the polyamide (I) is at least one polyamide chosen from the group consisting of polyamides-4, -6, -10, -11, -12, -4,6, -6,9, -6,10, -6,12 and -12,12.

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9. The use in the preparation of polyphase composite materials of a composition as claimed in one of claims 1 to 8 in combination with at least one compound chosen from fibers, such as glass fibers, carbon fibers or other fibers derived from carbon, metal fibers or textile fibers.

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10. The use in the preparation of polymer alloys of a composition as claimed in one of claims 1 to 8 in combination with at least one compound chosen from polyamides and polyolefins.

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11. The use in the preparation of objects by techniques for the conversion of thermoplastics, such as injection molding, extrusion, blowing or molding, of a composition as claimed in one of claims 1 to 8.

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12. A polyphase composite material obtained as claimed in claim 9.

13. A polymer alloy obtained as claimed in claim 10.

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14. An object as claimed in claim 11.